Reference 2

STATE OF ILLINOIS
DEPARTMENT OF REGISTRATION AND EDUCATION
RONALD B. STAGFLEW
DIRECTOR SPRINGFIELD
BOARD OF NATURAL RESOURCES AND CONSERVATION

ILLINOIS STATE GEOLOGICAL SURVEY

NATURAL RESOURCES BUILDING, URBANA, ILLINOIS 61801 TELEPHONE

Jack A. Simon

P. O. Box 1
Warrenville, Illinois 60555
February 25, 1976

Paxton Landfill Corporation
File No. WK-76-9022

Mr. William L. Kabaker
Epton & Druth, Ltd.
69 West Washington Street Suite 1900
Chicago, Illinois 60602

Dear Mr. Kabaker:

Dr. Cartwright of our Urbana Office has referred your letter of February 11, 1976, in which you requested a hydrogeologic evaluation of the Paxton Landfill site, to me for reply, as past inquiries and reports concerning this site have been handled from this office.

The landfill is located in Section [illegible], T. [illegible] S., R. [illegible] E. [illegible] County, between 11th and 11th Streets, Paxton [illegible] Ivory Island Avenues. It has been visited and evaluated on two occasions by former members of our staff — Dr. George Hughes in 1971 and Mr. Ronald Landon in 1974.

To briefly summarize their findings, they both observed that the low-lying, almost level lake plain that had been naturally present at this site has been disturbed and modified through the removal of sand and extensive trenching and filling operations so that the topography has become quite irregular. They both noted the presence of up to 10 feet of surficial sand exposed in some trench excavations on the site. Dr. Hughes also observed mounds of fine-grained material next to some of the trenches which he identified as silty-clay till and which he assumed had been removed from beneath the sand in the trenches.

From these observations and additional information on maps and in files of the Illinois State Geological Survey they both concluded that approximately 10 to 12 feet of surficial sand naturally occurred on this site, underlain by relatively impermeable silty-clay till. The two engineering borings in the Design Study Report which accompanied your letter, but which they had not seen, also confirm the presence of this sequence of materials. Our information indicates that the till is approxi-

Exhibit #1

Mr. [illegible]

mately 50 feet thick so the unconsolidated sand and till sequence overlying the dolomite bedrock is about 60 feet thick.

In 1964, Mr. Landon reported record of only one Silurian dolomite well in our files within one mile of this site and since then we have received no additional records as the Silurian dolomite is rarely used for water supply in this area.

The probability is low that any leachate generated by the disposal of waste at this site would reach a ground-water aquifer. No sand and gravel aquifers are reported in the drift sequence and furthermore, the silty-clay till that overlies the Silurian dolomite is sufficiently thick and impermeable to protect this aquifer. Therefore, the disposal of waste at this site poses very little hazard to any ground-water supply.

Yours truly,

Jean I. Larsen

Jean I. Larsen
Associate Geologist
Northeastern Illinois Office
Hydrogeology and Geophysics Section

JIL/jgc
cc: Tom Cavanaugh
Benn Leland
H. W. Poston
Keros Cartwright